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Series

Italy

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Components Production/Test Equipment

Italy

U.S. DEPARTMENT OF COMMERCE
International Trade Administration

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Fast-growing demand for wafer fabrication and semiconductor assembly equipment characterizes the Italian market for electronic components production/test equipment, currently the fourth largest in western Europe. Spurred by ambitious plans to strengthen the output of the semiconductor industry, turnover increased a significant 17.5 percent between 1983 and 1984 (see table 1 and figure 1). Strong sales of semiconductor manufacturing and test equipment and heavy investments in TV tube manufacturing are projected through 1986; more moderate growth is predicted in wafer fabrication and semiconductor assembly equipment from 1987 onwards as users consolidate their new position.

Test equipment sales are expected to increase at a healthy pace even after 1986 because of automation improvement projects still pending. Sales of semiconductor test equipment to semiconductor manufacturers, which rose from $5 million in 1980 to $9.9 million in 1984, are projected to hit $12 million in 1987. U.S. suppliers dominate this market with nearly 75 percent of sales. They face no domestic competition and have technological and sales organization advantages over German and Japanese sources.

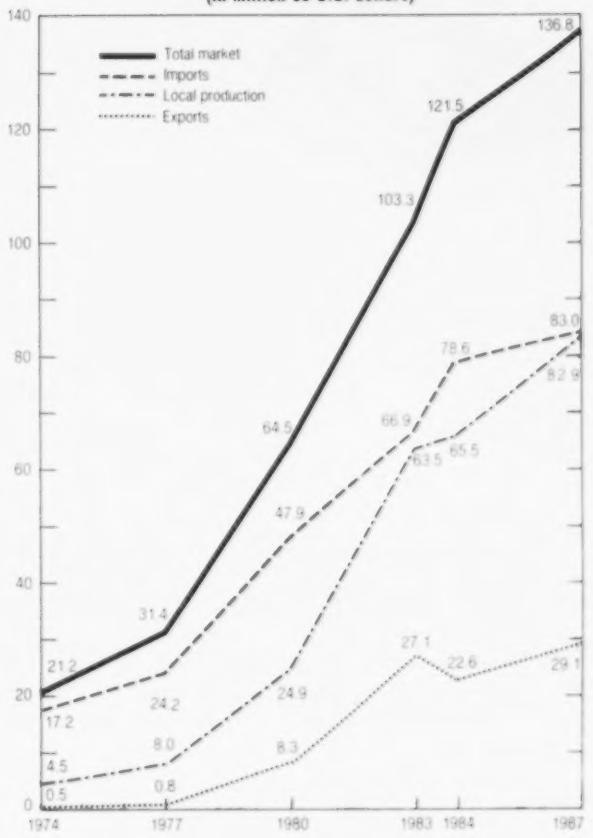
End Users

Italy's electronic components industry, which registered a 1984 output of $620 million, is most developed in passive components, where a number of small and medium-sized companies prosper because of their flexibility, servicing, and competitive prices. SGS-ATES, a government-controlled company, is virtually the only producer of active components outside of the subsidiaries of French, British, and U.S. multinational concerns. Local firms are increasing their technical skills in several areas, including bipolar analog IC's and high-density CMOS and do well in TV tubes, as well as passive components such as film capacitors and PC boards. Government action to support and encourage the industry has been minor so far, although a proposed Three-Year Plan creating a consortium of manufacturers, users, universities, and government entities is creating some interest and may boost research expenditures.

SGS-ATES, which accounts for 90 percent of **semiconductor** output, is by far the largest single purchaser of electronic components production and test equipment (see table 2). SGS-ATES mainly produces discretes and integrated circuits and is best known for its line of power transistors, produced with multiepitaxial technology and the advanced 'mesa' process. SGS-ATES is developing advanced bipolar analog manufacturing technology, and is expected to make significant progress in high-density CMOS technology through agreements with Toshiba. The company is vastly expanding its production capacity. After massive investments in production and test equipment in the 1983-85 period, some slackening is projected for 1987, with a rising trend expected again over the long run. The only links with component production and test equipment producers are mild connections with LPE for epitaxial reactors and SPIGA for semiconductor assembly.

Other large semiconductor producers include: Texas Instruments Semiconduttori Italia, which runs a plant in Rieti for bipolar digital IC assembly and power transistor production/assembly; IRCI, which produces diodes and SCR up to 100A, with an integrated line including diffusion and encapsulation; Ansaldo, which makes power semiconductors for its

Figure 1
Italy: The market for electronic components production/test equipment, 1974-87
(in million os U.S. dollars)



Note: All values are given in U.S. dollars. Local currency is converted at the following exchange rates: US$1 = 661.0 Lira (1974); 882.5 Lira (1977); 856.5 Lira (1980); 1,518.8 Lira (1983); and 1,753.3 Lira (1984 and subsequent years). Values for 1984 and later years are given in 1984 constant dollars.

Source: "The Italian Market for Electronic Components Production/Test Equipment," prepared by Dott. Claudio Buchal, Via Boccaccio, 4, 20123 Milan, Italy, January 1985, under contract to International Trade Administration, U.S. and Foreign Commercial Service (see Additional Information box).

Table 1.—Italy: The market for electronic components production/test equipment, 1974-87
(in thousands of U.S. dollars)

	1974	1977	1980	1983	1984	Projected 1987
Wafer fabrication equipment						
Production	—	—	350	988	1,312	1,312
Imports	5,144	7,365	13,660	21,003	30,970	31,426
Exports (less)	—	—	—	263	342	342
Total market	5,144	7,365	14,010	21,728	31,940	32,396
Semiconductor assembly equipment						
Production	378	680	1,751	2,633	3,137	3,422
Imports	681	907	2,102	3,095	3,707	3,707
Exports (less)	—	—	700	1,119	1,141	1,426
Total market	1,059	1,587	3,153	4,609	5,703	5,703
Passive and other components production equipment						
Production	3,479	5,552	14,010	34,896	30,799	35,362
Imports	5,295	7,252	15,178	25,020	25,666	29,658
Exports (less)	453	567	4,670	18,436	13,688	15,970
Total market	8,321	12,237	24,518	41,480	42,777	49,050
Components test equipment						
Production	605	1,813	8,757	25,020	30,229	42,776
Imports	6,051	8,725	16,929	17,777	18,251	18,251
Exports (less)	—	227	2,918	7,242	7,415	11,407
Total market	6,656	10,311	22,768	35,555	41,065	49,620
Total market						
Production	4,462	8,045	24,869	63,537	65,476	82,872
Imports	17,170	24,249	47,869	66,895	78,595	83,042
Exports (less)	453	793	8,289	27,060	22,585	29,145
Total market	21,179	31,501	64,449	103,372	121,486	136,769

Source: "The Italian Market for Electronic Components Production/Test Equipment," prepared under contract to International Trade Administration, U.S. and Foreign Commercial Service (see Additional Information box).

own use and also manufactures photovoltaic cells; and Secowest, which produces diodes and SCR under license from British Westinghouse (see tables 3a, 3b, and 3c).

The makers of **other active components** produce mainly electron tubes and hybrid IC's. Videocolor, a subsidiary of the French Thomson-Brandt, manufactures the bulk of the electron tubes and plans to double the production capacity of its Anagni plant, involving expenditures of $100 million for production and test equipment in the 1984-86 period. Hybrid IC production, most of it captive, comes from a number of major manufacturers including: the Fiat-controlled Marelli Autronica, which produces hybrid IC's for automotive controls; Italtel, the telecommunications giant, which makes printed and hybrid circuits for its own use; Telettra, which also manufactures for its own telecommunications purposes; Selenia, which produces hybrid IC's for professional electronics and telecommunications; and Aurel, the major merchant producer.

Approximately 30 companies produce **passive components.** Arcotronics, the major manufacturer of capacitors, is strong in film technology. AMP Italia leads in production of connectors, which are also supplied by other U.S. subsidiaries like Burndy, Bendix, Litton, and Texas Instruments. NEOHM and SECI have the major names in resistor production. La Zincocelere leads in printed circuits, followed by Lares Cozze. Other smaller manufacturers are oriented to consumer electronics PC's, and Italtel, Telettra, and Elettronica are captive producers.

The **electronics industry** is the other major end user of production/test equipment. With annual output of around $5.4 billion, the industry now represents less than 2 percent of GNP but is seen as a strategic sector whose growth is expected to outperform GNP in the coming decade. In **telecommunications,** overall investments of $100 billion are projected under the National 1984-95 Plan. In **computers,** Olivetti is making heavy investments in its personal computer production plant at Scamagno, and IBM is strengthening its small systems assembly works near Rome. In **other systems,** the aerospace and military sectors are showing spectacular progress that is expected to continue. ATE for printed circuits for military use offers particularly good prospects for U.S. vendors. Industrial and consumer electronics represent the weakest aspects of the electronics industry, although some recovery is expected from the ever-increasing electronic content in automotive manufacturing, as well as in robotics.

Competitive Assessment

Italian production/test equipment makers have increased their output significantly since 1980 but still

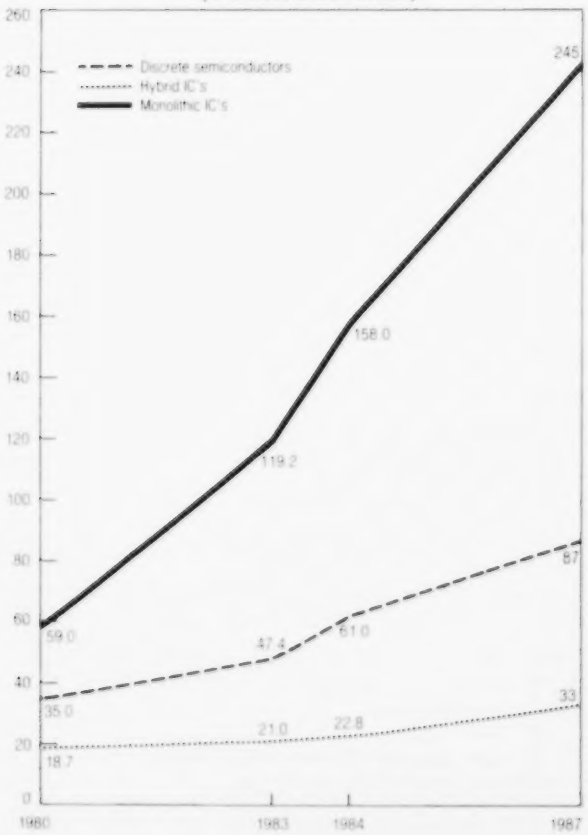
Table 2.—Italy: Economic indicators of major end users, 1983

	Employees		Factories		Production		Investment			
	Domestic	Offshore	Domestic	Offshore	All comp.	Semicdr. (in millions of U.S. dollars)	Capital	Prod./test equip.	R & D Expenditure	Types of components produced
SGS-ATES	4,300	4,100	2	4	230.0	230.0	53.00	43.70	29.90	All nonpower
Texas I.S. Italia	600	—	1	—	14.5	14.5	2.40	2.00	1.30	Bipol. digit. IC, power transistor
I.R.C.I.	270	—	1	—	5.8	5.8	1.00	0.85	0.55	Power diodes, SCR, opto-electronics
Ansaldo	160*	—	1	—	3.5	3.5	0.45	0.40	0.35	Power diodes, SCR, opto-electronics
Secowest	130	—	1	—	2.0	2.0	0.23	0.20	0.14	Diodes, opto-electronics

* Semiconductor employees only.
Source: International Trade Administration research report.

supply only a third of the market. Virtually all the major international manufacturers play a role in all product categories. Government attitudes toward imports are basically neutral. Components production/test equipment is considered a high-technology investment essential to a competitive electronic industry, so imports are not discouraged. Purchasers are open to any supplier offering challenging technology, performance, prices, or other interesting marketing factors, regardless of the country of origin.

Figure 2
Italy: Local semiconductor production, 1980-87
(in millions of U.S. dollars)



U.S. suppliers.—U.S. manufacturers supply most equipment, completely dominating the markets in water fabrication and component test equipment (see table 4). Advanced technology explains their success, enabling them to retain their first-place position for over a decade in spite of the strength of the dollar. The outlook for sales remains good, although a mild decline is expected as the multinationals transfer some of their exports to offshore subsidiaries. High prices may also push some purchasers to try the advanced products of other suppliers.

Semiconductor production and testing equipment represents an open field for American vendors. The most salable wafer fabrication products are mask-making devices, E-beam direct write equipment, and advanced aligners and furnaces. Computer Aided Design work stations have greatest demand in semiconductor assembly equipment. Sales opportunities diminish in the more conventional area of passive and other components production equipment, but include machines for hybrid circuit production, resistor manufacturing equipment, and automated measurement bridges.

American groups clearly lead the market in testing equipment. Fairchild is thought to control 50 percent of the ATE market for Very Large Scale Integration (VLSI) equipment with its 'Sentry 50' system and is by far the leader in memories and digital IC testing. Teradyne has the leading position in linear IC testing devices, and GenRad has a wide product range, especially in inspection equipment and probe systems.

To protect and increase their import share, U.S. companies need to accompany their technological advantage with excellent servicing. They could also consider a financing policy of selectively stretching payments over 90 to 180 days on a no-interest basis.

Table 3a.—Italy: Production of semiconductors, 1980-87
(in millions of U.S. dollars)

	1980	1983	1984	Projected 1987
Discrete semiconductors	35.0	47.4	61.0	87
Optoelectronic devices	11.1	11.2	12.0	15
Bipolar IC's	43.2	69.1	89.5	120
Hybrid IC's	18.7	21.0	22.8	33
MOS logic	7.6	24.4	33.1	60
MOS memory	8.2	25.7	35.4	65
Totals	123.8	198.8	253.8	380

Source: International Trade Administration research report.

Table 3b.—Italy: Semiconductor manufacturing profile, 1983-84
(in percentages)

	1983	1984
Wafer size		
100 mm	20	15
125 mm	50	50
150 mm	25	30
larger than 150 mm	5	5
	100	100
Level of integration		
Discrete	25	25
SSI/MSI (under 100 gates/chip)	50	50
LSI (100-999) gates/chip)	20	15
VLSI (1,000 or more gates/chip)	5	10
	100	100
Process technology		
Bipolar	60	55
NMOS	25	20
CMOS	15	25
	100	100
Packaging technology		
Dual in-line packaging (DIP)		
Plastic	80	80
Ceramic	15	15
Other	5	5
	100	100
Die attachment		
Eutectic bonding	10	15
Epoxy	70	65
Other	20	20
	100	100
Bonding wire		
Aluminum	70	70
Gold	20	20
Other	10	10
	100	100
Number of pins/grid (PGA)		
Below 20	5	—
20-40	30	30
Over 40	65	70
	100	100

Source: International Trade Administration research report.

Table 3c.—Italy: Semiconductor testing profile, 1983

	Acceptable yield (%)
Production stage	
Microlithography	70
Etch and strip	50
Ion implantation/diffusion	45
Deposition	60
Assembly	90

Source: International Trade Administration research report.

Local suppliers.—Fifty companies, most of them small, make up the domestic production/test equipment industry. Only Arcotronics, Olivetti-Tecnost, Angelantoni, and Argon have more than 100 people on their payrolls (see table 5). The industry boasts high productivity levels, complete control of the specific technology in its narrow product range, and a flexible attitude toward customers, often offering customizations and services in addition to products.

Relying on their price advantage and flexible response to customers' needs, and an expanding range of products, local suppliers have increased their overall market share from 26 percent in 1980 to 35 percent in 1984. Their basically conventional technology is reflected in strong output of passive component production equipment. Technical exchanges with large users occur frequently. Offshore manufacturing is minimal, probably due to limited company size, which also keeps R&D at low levels. Research is seldom a planned activity separate from production; it usually constitutes an improvement in product engineering.

Exports accounted for 35 percent of production in 1984, almost half of them passive component production items (see table 6). Most exports go to Europe, although the United States ranks as a major destination, attesting to Italian marketing aggressiveness and competitiveness.

LPE is the only local company active in wafer production equipment and works in close cooperation with SGS-ATES to make epitaxial reactors. SPIGA, also working closely with SGS-ATES, is the only producer of semiconductor assembly machines, although SGS-ATES and Texas Instruments' Italian operation produce mechanical interfaces for foreign-made equipment, specially designed functional testers, and finishing machines for their own use. Many companies produce passive component manufacturing equipment (see list of Leading Suppliers). The five makers of component test equipment concentrate on printed circuits and environment testing devices (see table 7).

The small home market does not justify merchant production of semiconductor test equipment, but SGS-ATES manufactures locally for the captive market. Among its testers are probers, handling

equipment, and assembly inspection machines. Texas Instruments is also known to have built some testers for its own use in Italy.

Third-country suppliers.—The Japanese, although relatively new to the market, have boosted their import share from 6 percent in 1980 to 15 percent in 1984, moving into second place behind the United States in the list of foreign suppliers. Moderate prices contribute greatly to their success, but the Japanese are also known for genuine innovations and challenging technology. Companies such as Canon dominate the market for oscilloscopes under 50Mhz. Japanese firms control nearly a third of the market for all chemical deposition techniques and are introducing Metal Electro Face Binding, a breakthrough technique already adopted by two large end users. They offer unique solutions in layer-technology resistor production equipment and have rapidly growing sales of chip testers and miniaturized component surface mounting for hybrid circuits. In semiconductor test equipment, Japanese companies are expected to gain ground soon with complete finishing and testing lines and in a 5-year period with sophisticated automatic test equipment.

Table 4.—Italy: Imports of components production/test equipment, 1980-87
(in thousands of U.S. dollars)

	1980	1983	1984	Projected 1987
Wafer fabrication equipment				
United States	12,843	19,160	27,947	27,377
Germany	233	790	970	
France	467	790	913	
Japan	—	—	798	
Others	117	263	342	
Total	13,660	21,003	30,970	31,426
Semiconductor assembly equipment				
United States	1,693	2,239	2,624	2,567
Japan	233	658	799	
Germany	176	198	228	
Others	—	—	56	
Total	2,102	3,095	3,707	3,707
Components test equipment				
United States	14,945	14,814	14,829	13,688
Japan	1,168	1,646	1,996	
United Kingdom	350	329	570	
Germany	233	263	228	
Switzerland	233	198	171	
Others	—	527	457	
Total	16,929	17,777	18,251	18,251
Passive and other components production equipment				
United States	3,269	1,317	1,141	1,141
Japan	1,635	8,296	8,555	
Germany	7,122	8,296	7,985	
Norway	—	5,136	5,247	
France	1,168	658	628	
Others	1,984	1,317	2,110	
Total	15,178	25,020	25,666	29,658
Total imports				
United States	32,750	37,529	46,541	44,773
Japan	3,036	10,600	12,148	
Germany	7,880	9,810	9,753	
Norway	—	5,136	5,247	
France	1,635	1,515	1,654	
Others	2,568	2,305	3,252	
Total	47,869	66,895	78,595	83,042

Source: International Trade Administration research report

Precision mechanics, combined with a traditional presence in the market, give the Germans a leadership position in many equipment areas, including ovens, vacuum technique based equipment, PC layer machines, and multilayer presses. They still lead the import market in the passive component segment, despite the strong Japanese showing, and are particularly strong in passive component finishing equipment. The French have a solid reputation for diffusion oven control systems, sold mostly to SGS-ATES. The United Kingdom ships components test equipment, and the Swiss are known for PC machining centers.

Business Practices

About 70 percent of the foreign-made production/test equipment is marketed through distributors or local sales branches, with the remaining split equally between agents, direct purchases from abroad, and domestic manufacturers acting as distributors. Distributors usually handle products with relatively low unit prices, especially passive component production equipment. High unit value items are sold either through agents or by direct purchase to avoid the double invoicing of selling through distributors. Agents receive a commission of 3-10 percent. Some large foreign groups, including some United States instrumentation producers, appoint a local distributor or agent for sales work but handle the maintenance, service, and training aspects themselves from abroad or from a special local servicing office. (The research contains lists of trade shows, associations, and journals pertinent to production/test marketing efforts.)

Prices are generally pegged to European levels and comprise only one key element in the purchase decision. Maintenance is crucial, as purchasers want rapid payback on their investment goods and cannot tolerate downtime due to inefficient aftersales service. Training courses are always welcomed and can be held either in Italy or abroad, but the use of English is not yet widely accepted. Payment terms are important in Italy, since financing costs are high; the terms available from United States suppliers are considered more stringent than those from European or Japanese sources.

Imports of electronic component production/test equipment must conform to regulations. Goods from EEC members and from EEC-associated countries enter duty-free, and shipments from some other

Table 5.—Italy: Major domestic manufacturers of components production/test equipment, 1983
(in millions of U.S. dollars)

	Employees (in-country)	Foreign affiliation	Production: Semiconductor prod./test equipment	Production: All	Production: Exports	Capital investment
Arcotronics	1,300	Arcotronics (USA)	—	14.5	12.8	2.85
Olivetti-Tecnost	230	—	—	12.9	2.5	1.65
Angelantoni	160	—	1.7	5.4	3.0	0.68
Spea	75	—	—	3.8	2.8	0.45
Argon	150	—	—	3.2	2.25	0.66

Source: International Trade Administration research report.

countries enjoy tariff reductions under the EEC special preferential system. Items from American makers are subject to tariffs ranging from 4.1 percent for machines for electric cable production to 8.7 percent for electric and electronic testers. All imported items are charged an 18-percent value-added tax on the landed value plus duties.

In accordance with EEC regulations, import quotas are applied to shipments from Japan and other Far Eastern countries. Because Italy depends heavily on imports, however, temporary exemptions from duties and/or import quotas are not uncommon. Import licenses issued by the Italian Ministry for Foreign Trade are mandatory for products from non-EEC associated countries in South Asia. A place-of-origin certificate is essential to expedite customs procedures.

Table 6.—Italy: Exports of components production/test equipment, 1980-87
(in thousands of U.S. dollars)

	1980	1983	1984	Projected 1987
Wafer fabrication equipment				
United States	—	—	—	
France	—	—	228	
Singapore	—	263	114	
Total	—	263	342	342
Semiconductor assembly equipment				
United States	—	—	—	200
Singapore	292	429	428	
Malaysia	175	296	314	
Malta	—	230	228	
France	233	164	171	
Total	700	1,119	1,141	1,426
Components test equipment				
United States	—	—	—	200
Germany	1,284	3,292	3,365	
United Kingdom	525	1,448	1,369	
France	409	922	855	
South Africa	—	395	399	
Others	700	1,185	1,427	
Total	2,918	7,242	7,415	11,407
Passive and other components production equipment				
United States	1,167	7,572	3,878	5,703
Germany	1,751	3,160	2,852	
France	584	2,634	2,395	
United Kingdom	584	1,317	1,141	
Others	584	3,753	3,422	
Total	4,670	18,436	13,688	15,970
Total exports				
United States	1,167	7,572	3,878	6,103
Germany	3,036	6,452	6,217	
France	1,226	3,720	3,650	
United Kingdom	1,109	2,765	2,510	
Singapore	291	691	542	
Others	1,459	5,860	5,788	
Total	8,288	27,060	22,585	29,145

Source: International Trade Administration research report.

Table 7.—Italy: Purchases of components production/test equipment by end-user sector, 1980-87
(in thousands of U.S. dollars)

	1980	1983	1984	Projected 1987
Merchant producers	57,910	81,907	97,359	107,682
Captive producers	5,954	20,510	23,129	27,832
Research and other	584	955	998	1,255
Total	64,448	103,372	121,486	136,769

Source: International Trade Administration research report.

Leading Suppliers

Company	Foreign affiliate or country of mfgr.	Products
Wafer fabrication equipment		
LPE	Italy	Epitaxial reactors
Foreign suppliers:		
APT	United States	Etch equipment
Applymaterial	United States	Etch equipment
Balzers	Liechtenstein	Vacuum deposition equipment
Censor, United States	Liechtenstein	Mask-making equipment
Dai Nippon	Japan	Mask-making devices
Eaton	United States	Ion implantation equipment
Electromask	United States	Mask-making devices
Electrotech	United Kingdom	Etch equipment
G.C.A.	United States	Microlithography instruments
Leybold-Heraeus	Germany	Vacuum evaporators
M.R.C.	United States	Vacuum evaporators
Perkins Elmer, United States	United States, Germany	E-beam mask-making devices
Semi	France	Diffusion oven control systems, thin layer deposition equipment
Termco	United States	Diffusion ovens, thin layer deposition equipment
Ultratech	United States	Microlithography steppers
Varian	United States	Ion implanters, metallization equipment
Semiconductor assembly equipment		
SGS-ATES	Italy	Dicing, bonding equipment
Spiga	Italy	Bonding equipment
Dexter	Germany	Encapsulation equipment
Fuji	Japan	Bonding equipment
Hawera	Germany	Dicing equipment
Kulicke & Soffa	United States	Bonding equipment
Orthodyne	United States	Bonding equipment
Sagax Instrument	Sweden	Dicing equipment
Semas	Switzerland	Bonding equipment
West Bond	United States	Bonding equipment
Components test equipment		
Angelantoni	Italy	Test equipment
Ferco	Italy	Test equipment
Olivetti Tecnost	Italy	PCB testers, field service testers
SGS-ATES (Automatic Dept.)		Dedicated testers
Spea		PCB testers, automated testers
Canon	Japan	Test equipment
Fairchild Test System Group	United States	Test equipment
Genrad	United States	ATE bench test equipment, test systems, field instrumentation
Heraeus-Votch	Germany	Environmental test equipment
Hewlett-Packard	United States	Test equipment
Leitz	Germany	Test equipment
Lem	Switzerland	Dedicated test equipment
Marconi	United Kingdom	ATE
Tektronix	United States	Test equipment instrumentation
Weiss	Germany	Environmental test equipment
Passive and other components production		
Arcotronics Italia (S—Arcotronics, United States)	Italy	Film capacitator making machines
Alfachimici	Italy	PCB electroplating equipment
Andretto	Italy	Plastic molding and printing equipment
Angelantoni	Italy	Climatic chambers
Argon	Italy	Silk screen equipment
Aurel	Italy	Hybrid circuit production equipment
BFI	Italy	Multilayer PCB presses
Biellomi	Italy	Coil-winding equipment
Circuit Line	Italy	PCB machining centers
Cugher	Italy	Silk screen equipment
Demo	Italy	Racks, cabinets
Elmi	Italy	PCB electroplating equipment
Ferco	Italy	Component inserting and fastening equipment
International Supply	Italy	PCB chemical pickling systems
Mazzali	Italy	Continuous ovens
Mir	Italy	Plastic-molding equipment
Negri & Bossi	Italy	Plastic-molding equipment
Nemi Impianti	Italy	PCB stripping lines
Ocleppo	Italy	PCB chemical pickling equipment
Omp	Italy	Hybrid circuit transfer and soldering equipment
Orlandi	Italy	PCB chemical pickling equipment
Pluritec	Italy	PCB machining centers
Pola & Massa	Italy	PCB infrared welding lines
Resco	Italy	Multilayer PCB machines
Tacs	Italy	PCB processing ovens
Tekma-kinomat	Italy	Coil-rewinding machines
Teruzzi	Italy	Multilayer PCB presses
Asca Trading	Japan	Welding equipment
Balzers	Liechtenstein	Ovens and furnaces
BTV	Germany	Continuous ovens
Buerkle	Germany	PC presse
Chemcut, United States	United States, Germany	PCB metal-treating machines
Dupont, United States	United States, Germany	PCB stripping equipment
Excellon	United States	Artwork generation equipment
Gravel	Germany	Finishing equipment

Leading Suppliers—Continued

Company	Foreign affiliate or country of mfgr.	Products	Company	Foreign affiliate or country of mfgr.	Products
Lanfer	Germany	IC special resins	Smith	Germany	PCB copper treatment equipment
Leybold Heraeus	Germany	Evaporation ovens			
Markem	Germany	Finishing equipment	Streckfuss	Germany	Welders, passive component finishers
Movinkel	Germany	Finishing equipment			
OHS Miller	Germany	PC machines	Svecia	Sweden	Silk screen equipment
Pasadena	United States	PC presses, multilayer	Universal	United States	Passive component finishers
Rotawinder	United Kingdom	Winding machines			

Italy: Basic Economic Indicators

Population:	56.345 million (1984)	Imports c.i.f.:	$84.4 billion (1984)
GDP:	346,443 million (1984)	U.S. share:	60% (1984)
Contributions to GDP:	Services 55% (1984) Industry 39% Agriculture 6%	Major trading partners:	France, Netherlands, Germany, United Kingdom, United States, OPEC, USSR, Eastern Europe
Average annual growth rates:	Services 3.3% (1984) Industry 2.8% Agriculture 1.2%	Exchange rate:	1785 lire = US$1 (1984)
		Fiscal year	Calendar year
		Current account balance:	3,000 million (1984)
Per capital income:	$6,207 (1983)	International reserves:	$44,552 million (1982)
Inflation rate:	10.6 (1984)	Labor force:	23 million (1984)
Exports f.o.b.:	73.4 billion (1984)	Unemployment:	10.4 (1984)
U.S. share:	10.2% (1984)	Average hourly wage:	8.05 (1984)

Useful Addresses

Embassies

American Embassy
Commercial Section
Via Veneto 119/A
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tf: 46 74
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Embassy of Italy
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American Chamber of Commerce

Via Canto 1
20123 Milan
tf: 869 06 61

Technical standards

Ministero de Industria, Commercio, e Artigianato (MICA)
Direzione Generale Produzione Industriale (DGPI)
Inspettorato Tecnio Industria
Via Molise, 2
I-00100 Rome
tx: 610154 minind i

Available reports on Electronic Components Production/Test Equipment Markets

These reports are currently available from Export Promotion Services, at the address listed in the Additional Information box:

International Market Research (full research reports)

IMR/ECP/427/85	France (May 85)	$100	IMR/ECP/588/85	Japan (Mar 85)	$100
IMR/ECP/428/85	Germany (Mar 85)	100	IMR/ECP/421/85	Netherlands (May 85)	120
IMR/ECP/475/85	Italy (Jan 85)	100	IMR/ECP/583/85	Taiwan (Jul 85)	100
			IMR/ECP/412/85	United Kingdom (Apr 85)	100

Country Market Surveys (published reports — $10 each)

CMS/ECP/427/85	France (Dec 85)	CMS/ECP/475/85	Italy (Oct 85)
CMS/ECP/428/85	Germany (Dec 85)	CMS/ECP/412/85	United Kingdom (Oct 85)

International Marketing Information (U.S. embassy reports)

IMI/ECP/351/83	Brazil (Mar 83)	$35	IMI/XXX/XX1/85	Standard Organizations	$20
IMI/ECP/583/85	Taiwan (Feb 85)	15		Worldwide (Feb 85)	

Additional Information

The project officer responsible for Country Market Surveys on electronic components production/test equipment is:

Hayden M. Wetzel
ITA/EPS, Room H2012
U.S. Department of Commerce
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Telephone: (202) 377-4493

Current information on marketing conditions in Italy is available from:

Italy Desk Officer
ITA/IEP, Room H3045
U.S. Department of Commerce
Washington, DC 20230
Telephone: (202) 377-2177

Department-sponsored trade shows and other promotional vehicles for electronic components production/test equipment are handled by:

Joseph Burke
ITA/TD, Room H4412
U.S. Department of Commerce
Washington, DC 20230
Telephone: (202) 377-5014

For a free copy of the newest catalog of Market Research Division reports, which lists all Country Market Surveys and selected International Market Research reports, please write to:

International Market Research Services
ITA/EPS, Room H1324
P.O. Box 14207
U.S. Department of Commerce
Washington, DC 20044
Telephone: (202) 377-2665